
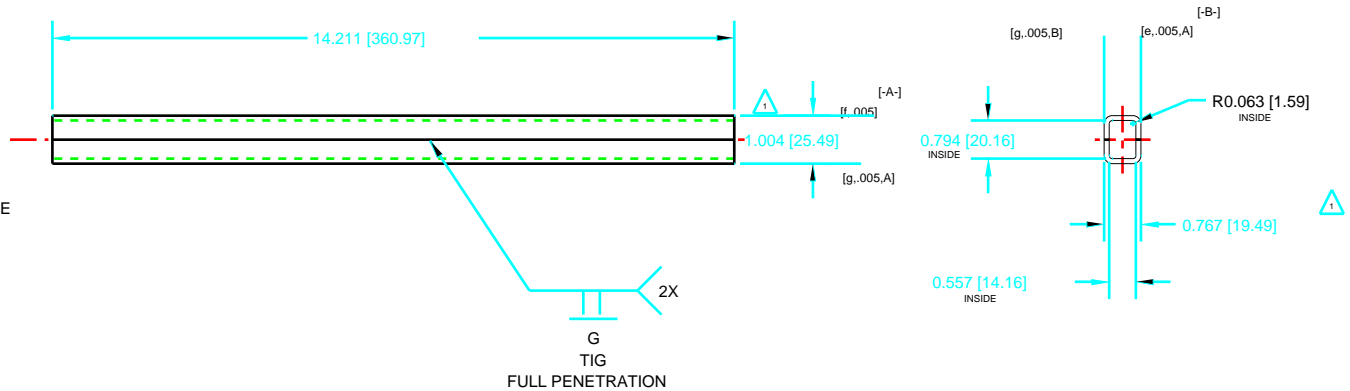


NOTES:

1. THIS IS A ULTRA - HIGH - VACUUM CHAMBER (UHV)
2. WHEN MACHINING VACUUM PARTS, USE OF SILICONE AND SULPHUR-BASED CUTTING FLUIDS IS PROHIBITED. USE ONE OF THE FOLLOWING:
A) CIMCOOL 5 STAR 49
B) TRIM SOL
3. ELECTROPOLISHING IS NEEDED BEFORE WELDING. PRIOR TO ELECTROPOLISHING, THE CHAMBER NEEDS TO GO THROUGH A MULTIPLE STEP CLEANING PROCESS INVOLVING DEGREASING, WASHING AND DRY NITROGEN BLOW DOWN. THE VACUUM SIDE SURFACE ROUGHNESS, OF THE CHAMBER, SHALL BE BETTER THAN 63 MICROINCHES RMS AFTER ELCTROPOLISHING.
4. WELDS SHALL BE GAS TUNGSTEN ARC (GTAW) OR
5. VACUUM CHAMBER SHALL BE LEAK TESTED USING A MASS SPECTROMETER WITH MINIMUM SENSITIVITY FOR HELIUM OF 2 X 10⁻¹⁰ STANDARD CC/SEC PER LEAK METER DIVISION, SUCH AS
ALCATEL SAM-110TCL
Du PONT CEC 24-120B
VARIAN MS-9, MS-90 OR MS-18

CALIBRATION OF THE LEAK DETECTOR SENSITIVITY SHALL BE PERFORMED JUST PRIOR TO TESTING.

FINAL TEST WILL CONSIST OF SURROUNDING THE ASSEMBLY (BAGGING) WITH HELIUM. THE ASSEMBLY WILL BE REJECTED IF A 2% DEFLECTION ON THE MOST SENSITIVE RANGE OF THE LEAK DETECTOR IS SENSED WITHIN 1 MIN.
6. KEEP THE ASSEMBLY CLEAN, AND WRAP FOR UHV PACKING WITH ALUMINUM FOIL.
7. DIMENSIONS IN [] ARE MILLIMETERS AND FOR REF. ONLY
8. MACHINE  FINISH FOR ALL VACUUM SURFACES BEFORE ELECTROPOLISHING
9. ALL MATERIAL IS 304 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED
10. STRESS RELIEVE FOR DIMENSIONAL STABILITY BEFORE MACHINING.



1	ADDED OUTSIDE DIM.	RAF		11/95
SYM	CHANGE DESCRIPTION	BY	CHKD	DATE
REVISIONS				

ITEM	DWG/PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
PARTS LIST				
UNLESS OTHERWISE SPECIFIED LOG NUMBER ALL DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS ANGULAR X .1 (2.5) 0.030 X .01 (0.25) X .005 (0.13)				
A2360101				
DRAWN BY FUHRMANN		DATE 10/30/95	CHIEF DESIGN ENGINEER D. SHU	DATE 11/1/95
CHECKED BY J. BARRAZA		DATE 10/31/95	OP. LEADER M. KUZAY	DATE 11/1/95
DESIGNER BARRAZA/FUHRMANN		DATE 10/31/95	PROJECT MGR.	DATE
RESPONSIBLE ENGINEER J. BARRAZA		DATE 10/31/95	APPROVED/RELEASED	DATE
MATERIAL 304 STAINLESS STEEL		SCALE HALF SHEET 1 of 1		
TITLE ADVANCED PHOTON SOURCE K3-21 2-ID-A 1ST COLLIMATOR ASSEMBLY VACUUM CHAMBER TUBE		DRAWING NUMBER P4105090403-210102-01		